

REMARKS

In response to the Examiner's objection to the Drawings and Specification as originally filed, corrected formal Drawings and a Substitute Specification are submitted herewith. The corrected submissions conform to the subject matter originally filed, and no new matter is deemed to be added.

In response to the Examiner's rejection of Claims 7-26 as unpatentable over the cited prior art, the Applicant herein amends Claims 7-24 to define the present invention more distinctly over the cited prior art. Specifically, the air thrust engine is mounted in a toroidal-shaped engine duct with a center axis aligned with the vertical axis of the hovercraft fuselage so as to direct a downward flow of air through its lower open end to provide vertical lift for the hovercraft, and the vane assembly is mounted across the lower open end of the vertically-aligned toroidal-shaped duct and has at least one vane element mounted therein which is angularly rotatable for directing at least a part of the downward flow of air at an angle to the vertical axis to provide a horizontal thrust component for steering the hovercraft translationally in horizontal flight.

The defined subject matter in the amended claims is now deemed to be patentably distinct from the teachings of the cited prior art. The primary Nunnally reference does not disclose or suggest using a vane assembly for horizontal thrust, but instead teaches using airfoils and tilting the rotor for horizontal flight. Of the secondary references cited, the Norman patent discloses an engine ducting that has directional scoops/jets on its sides for horizontal maneuvering, and the Creasey patent shows ducted fan engines with side flaps for directing a part of the thrust force for steering. However, neither reference suggests positioning a vane assembly across the bottom end of the duct housing the rotor engine for angularly directing a horizontal thrust component from the rotor's downward flow of air for translational steering.

Claims 25-26 directed to the air impeller engine per se are cancelled. Claim 27 is added, dependent on main Claim 7, defining in more detail the structure of the preferred vane

assembly. The remaining dependent claims are maintained, with corrections consistent with the amendment of main Claim 7, and are deemed to be patentable for the same reasons as amended main Claim 7.

In summary, Claims 7-24 and 27 are deemed to be patentably distinct over the cited prior art and in condition for allowance, and it is requested that a Notice of Allowance be issued upon reconsideration.

This response is filed with a certificate of mailing within the time allowed for response, and with total and independent claims after amendment numbering within the limits originally paid for with the filing fee. However, if any fees are deemed to be due for acceptance of this response, authorization is hereby given to charge our Deposit Account No. 502633.

CERTIFICATE OF MAILING:

The undersigned certifies that the foregoing is being mailed on Aug. 23, 2004, by depositing it with the U.S. Postal Service, first class postage paid, addressed to: Mail Stop: Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Respectfully submitted,
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